# October 1, 2007 WATER SUPPLY AND UTILIZATION REPORT BIGHORN RIVER BASIN WYOMING AREA OFFICE

This report concerns the operation of Reclamation facilities in the Shoshone and Wind/Bighorn River Basins.

Reclamation defines a water year as the time period of October 1 through September Water year is abbreviated in this report as W. Yr.

Other organizations furnished information for the Water Supply and Utilization Report Their cooperation is greatly appreciated.

This report is available on the Internet and can be accessed by following these steps:

- 1. Log on to the Great Plains Home Page at <a href="http://www.usbr.gov/qp">http://www.usbr.gov/qp</a>
- 2. Select Water Operations.
- 3. Select Water Management Information.
- 4. Select Water Supply Report.
- 5. Under Bighorn Basin, select Current Month or reports from the previous 12 months

### **BIGHORN RIVER BASIN INFLOW**

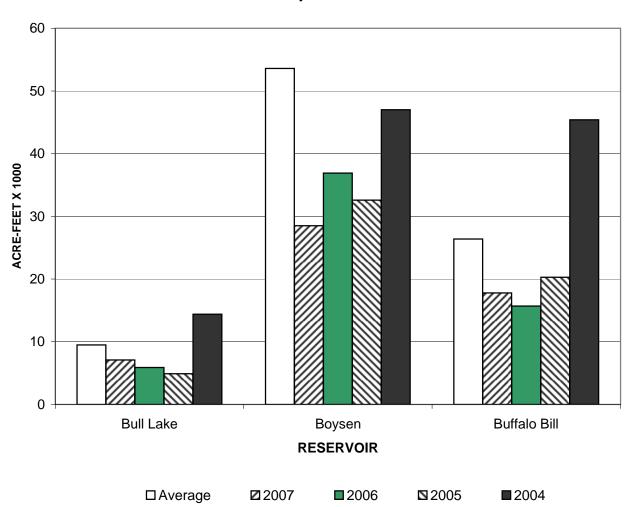
September inflow was below average at Bull Lake, Boysen, and Buffalo Bill Reservoirs.

(1000 acre-feet)

		September Inflow			September		Accumulated Inflow (October-September)		
Reservoir	W. Yr. 2007	30 Yr. Avg. <sup>1</sup>	% of Avg.	W. Yr. 2006	W. Yr. 2005	W. Yr. 2004	W. Yr. 2007	30 Yr. Avg. <sup>1</sup>	% of Avg.
Bull Lake	7.1	9.5	75	5.9	4.9	14.4	146.0	185.8	79
Boysen	28.5	53.6	53	36.9	32.6	47.0	468.3	940.8	50
Buffalo Bill	17.8	26.4	67	15.7	20.3	45.4	577.2	819.1	70

<sup>&</sup>lt;sup>1</sup> Average is based on the 1977-2006 period.

## BIGHORN RIVER BASIN RESERVOIR INFLOW September



#### **BIGHORN RIVER BASIN OUTFLOW**

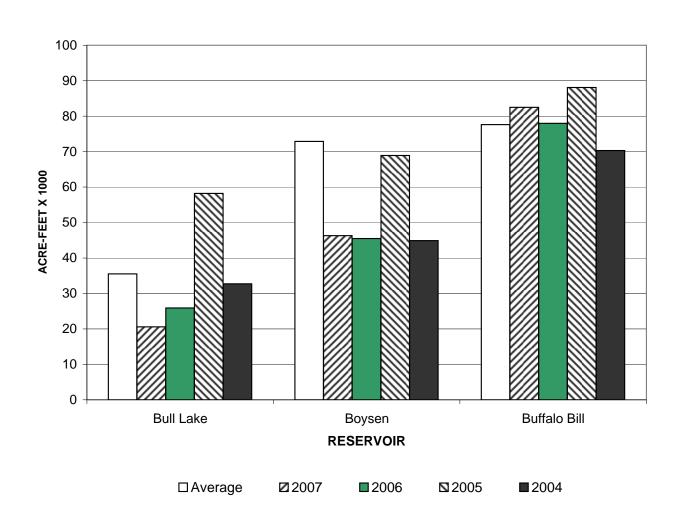
Releases from Bull Lake and Boysen Reservoirs were below average during September.

(1000 acre-feet)

	September Outflow			September Historical Outflow			Accumulated Outflow (October-September)		
Reservoir	W. Yr. 30 Yr. % of		W. Yr.	W. Yr.	W. Yr.	W. Yr.	30 Yr.	% of	
	2007	Avg. 1	Avg.	2006	2005	2004	2007	Avg. 1	Avg.
Bull Lake	20.6	35.5	58	25.9	58.2	32.7	149.4	185.9	80
Boysen	46.3	72.9	64	45.5	68.9	44.9	526.4	948.9	55
Buffalo Bill	82.5	77.6	106	78.0	88.1	70.3	600.5	814.5	74

<sup>&</sup>lt;sup>1</sup> Average is based on the 1977-2006 period.

## BIGHORN RIVER BASIN RESERVOIR OUTFLOW September



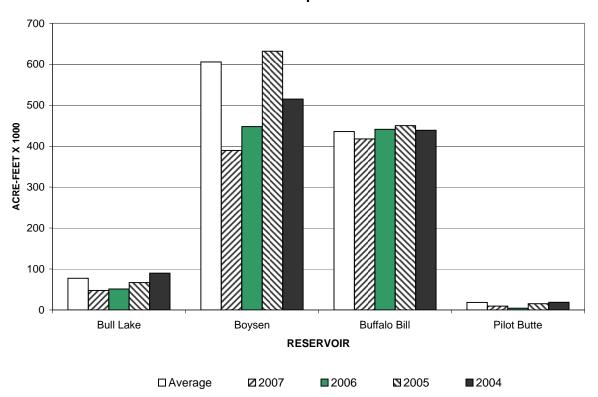
#### **BIGHORN RIVER BASIN STORAGE**

Storage at the end of September was below average at Bull Lake, Boysen, Buffalo Bill, and Pilot Butte Reservoirs.

(1000 acre-feet)

	Total Storage End of September				d of Septem storical Stor		Total Conservation	Percent of
Reservoir	W. Yr.	30 Yr.	% of	W. Yr.	W. Yr.	W. Yr.	Storage	Capacity
	2007	Avg. 1	Avg.	2006	2005	2004	Capacity	
Bull Lake	47.7	77.3	62	51.3	66.8	89.7	152.5	31
Boysen	389.7	605.7	64	447.8	631.9	515.2	741.6	53
Buffalo Bill	417.8	435.6 <sup>2</sup>	96	441.1	450.3	438.8	646.6	65
Pilot Butte	9.3	18.5	50	4.2	15.4	18.8	33.7	28

## **BIGHORN RIVER BASIN RESERVOIR STORAGE End of September**



Average is based on the 1977-2006 period.
 This does not reflect a long term average because in 1992 the capacity of the reservoir was increased to approximately 646,565 acre-feet as a result of raising the dam. The average used here reflects data from 1993 through 2006.

#### **BIGHORN RIVER BASIN GENERATION**

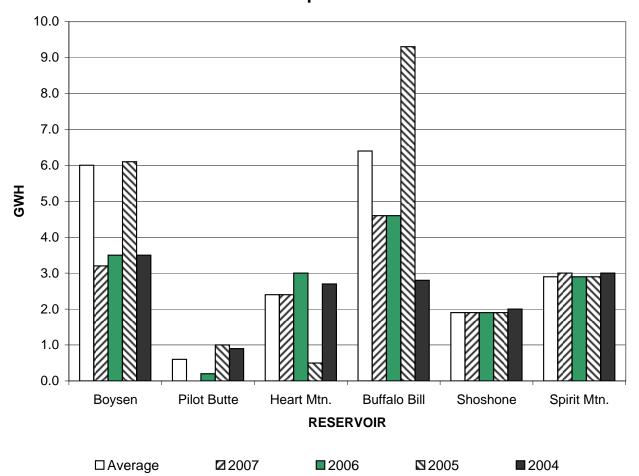
Generation was average or greater at Heart Mountain, Shoshone, and Spirit Mountain Powerplants.

(Energy in giga-watt hours)

	September Gross Generation			September Historical Generation			Accumulated Gross Gen. (October-September)		
Powerplant	W. Yr. 2007	Avg.	% of Avg.	W. Yr. 2006	W. Yr. 2005	W. Yr. 2004	W. Yr. 2007	Avg.	% of Avg.
Boysen <sup>1</sup>	3.2	6.0	53	3.5	6.1	3.5	39.1	68.6	57
Pilot Butte <sup>2</sup>	0.0	0.6	0	0.2	1.0	0.9	3.2	3.4	94
Heart Mtn. <sup>3</sup>	2.4	2.4	100	3.0	0.5	2.7	14.1	13.5	104
Buffalo Bill <sup>3</sup>	4.6	6.4	72	4.6	9.3	2.8	41.6	67.6	62
Shoshone <sup>3</sup>	1.9	1.9	100	1.9	1.9	2.0	20.8	20.6	101
Spirit Mtn. <sup>4</sup>	3.0	2.9	103	2.9	2.9	3.0	15.8	14.9	106

Average is based on the 1977-2006 period.

## **BIGHORN RIVER BASIN GROSS GENERATION September**



<sup>&</sup>lt;sup>2</sup> Average is based on the 1990-2006 period.

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